

FURTHER RECORDS OF AUSTRALIAN OPOSSUM SHRIMPS (*MYSIDACEA*)

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Text figs. 28-30.

SINCE the publication of my paper on Australian Mysidacea ⁽¹⁾ I have received a further small collection of specimens from the South Australian Museum. These include, firstly, two species of *Siriella*, collected by Mr. H. M. Hale in North Queensland, which I doubtfully refer to species described by Hansen from the waters of the Dutch East Indies. They represent additions to the Mysidacean fauna of Australia. Secondly, there is included a tube of Mysids collected by the late Dr. W. E. J. Paradiac in Watson's Bay, Sydney Harbour, containing several specimens of an exceedingly interesting new species, for which a new genus is proposed. This species possesses features quite unknown in any other Mysid, particularly in the form of the pleopods of the male. I am greatly indebted to Mr. Hale for this interesting material. The known Mysidacea of Australian waters now includes fourteen species. I have to thank my wife for the drawings which illustrate this report.

Family MYSIDAE.

Subfamily Siriellinae.

SIRIELLA Dana.

SIRIELLA VULGARIS Hansen (?).

Loc. Dredged in Owen Channel, Flinders Island, Princess Charlotte Bay, North Queensland, January, 1927 (C. 1683, coll. H. M. Hale).

Two immature females, 4-5 mm. in length, were taken. They are not in good condition, and I can find no important differences between them and the description and figures of *S. vulgaris* as given by Hansen in the Siboga Report. In the absence of male specimens, I record them provisionally under this name.

(1) Tattersall, Rec. S. Aust. Mus., iii, 1927, pp. 235-257.

SIRIELLA INORNATA Hansen (?).

Loc. Dredged in Owen Channel, Flinders Island, Princess Charlotte Bay, North Queensland, January, 1927 (C. 1691, coll. H. M. Hale).

Two males, 7–9 mm. in length, were secured; one is immature, but the other appears to be completely adult. They agree very closely with *S. inornata*, as described and figured by Hansen, except for a small difference in the terminal part of the exopod of the fourth pleopod of the male. The modified seta on



Fig. 28. *Sirella inornata*. Terminal part of the exopod of the fourth pleopod of the male ($\times 110$).

the penultimate joint is on the side opposite to that on which it is placed in *S. inornata* according to Hansen, and it is somewhat longer and stouter. The shorter of the two setae on the terminal joint is also relatively longer than shown in Hansen's figure. I give a figure (fig. 28) of the terminal part of the exopod of the fourth pleopod of the male for comparison with Hansen's figure (2). My material is too scanty to make sure whether this difference is constant, and I prefer, for the present, to record the specimens under Hansen's name.

Subfamily Mysinae.

Tribe ERYTHROPINI.

AUSTRALERYTHROPS gen. nov.

Eyes large, not depressed, pigment black. *Antennal scale* with the outer margin not setose, terminating in a prominent spine which projects beyond the apex of the scale; without terminal articulation. *Mandibles* with the incisive part and the movable lacinia well developed, molar process prominent, left mandible with the row of strong setae short, right mandible with a row of two

(2) Hansen, Siboga Report, xxxvii, pl. 4, fig. 2g.

or three toothed spines in the place of the strong setae; second joint of the palp moderately expanded, terminal joint rather long and narrow. *Maxilla* with the terminal joint of the palp not expanded; exopod well developed, equal in length to the first joint of the palp. *Maxillipeds* robust, second joint with a very conspicuous endite. *Gnathopods* somewhat long and slender. *Remaining thoracic limbs* slender, with the sixth joint of the endopod divided by transverse articulations into four subjoints. In the third thoracic limb the first of these subjoints is further divided by an oblique articulation. *Telson* entire, linguiform in shape, distal part of the lateral margins and apex armed with numerous closely set short spines, no plumose setae at the apex. *Inner uropods* with a row of stout spines extending almost the whole length of the inner margin. *Pleopods* of the male: First pair rudimentary as in the female, consisting of a simple, short, unjointed plate armed with setae; second and third pairs biramous, the rami subequal in length; fourth and fifth pairs biramous, with the endopod considerably longer than the exopod, and with some of the terminal setae modified; the endopod of the fifth pair more elongate than that of the fourth pair. *Incubatory lamellae* in the female, three pairs, the first pair small.

The most distinctive feature of this new genus is the structure of the pleopods in the male. The nearest approach to the condition in *Australerythrops* is to be found in the genus *Holmesiella* Ortman, but, in that genus, the first pleopod is not rudimentary and the endopod of the fourth pleopod only of the male is elongated and modified. Not only is the endopod of the fifth pleopod of the male in *Australerythrops* elongated and modified, but it is much longer than the endopod of the fourth pair. The form of the pleopods of the male in this genus is unparalleled in any other genus of the Mysidacea. The combination of the characters of the telson, eyes, antennal scale, and inner uropod will serve to distinguish the female from other genera of the tribe Erythropini, to which I refer this genus.

AUSTRALERYTHROPS PARADICEI sp. nov.

Carapace short, leaving the last two thoracic somites free, anterior margin not produced into a rostral plate, evenly rounded, and slightly upturned in lateral view, the whole of the eyes and eyestalks completely uncovered (fig. 29, *a*); anterolateral corners rounded. *Eyes* large, round, not dorsoventrally flattened or depressed, pigment black, eyestalks rather narrow and projecting sharply at right angles to the long axis of the body. *Antennular peduncle* (fig. 29, *b*), moderately robust, with a well-developed setose lobe in the male. *Antennal scale* (fig. 29, *c*) projecting slightly in front of the antennular peduncle four times as long as broad at its widest part, without terminal articulation, outer margin entire and without setae, and terminating in a strong spine which projects beyond the apex of the scale; antennal peduncle only about half

the length of the scale, the three joints subequal in length; no spine at the outer distal corner of the joint from which the scale arises. *Sixth abdominal somite* equal in length to the fourth and fifth combined. *Telson* (fig. 30, *e*) shorter

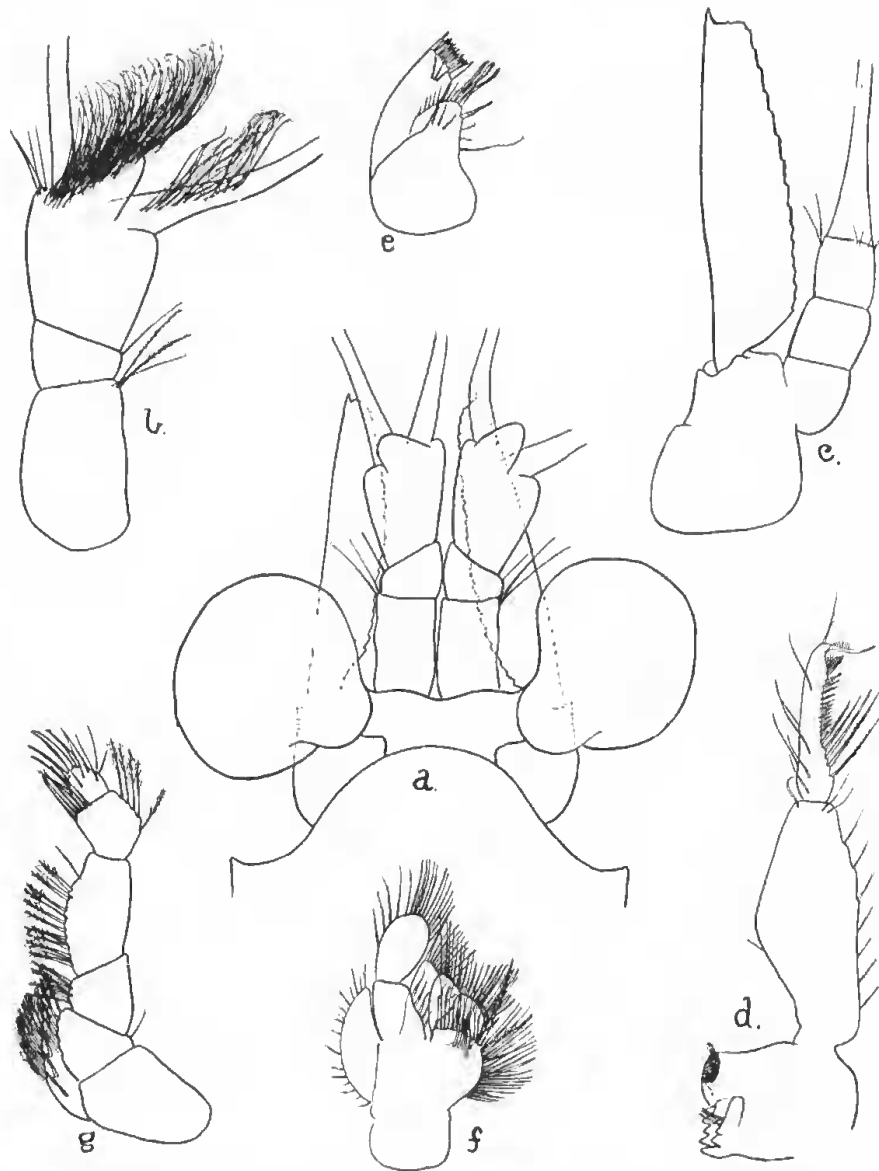


Fig. 29. *Australocythrops paradisei*. *a*, Dorsal view of the anterior end of a young male ($\times 39$); *b*, antennular peduncle of an adult male ($\times 39$); *c*, antennal scale and peduncle ($\times 39$); *d*, mandible and palp ($\times 50$); *e*, maxillula ($\times 50$); *f*, maxilla ($\times 50$); *g*, endopod of the maxilliped (first thoracic limb) ($\times 50$).

than the sixth abdominal somite, two and a quarter times as long as broad at the base, linguiform in shape, entire, without cleft, narrowing slightly to a broad and evenly rounded apex. The distal half of the margins of the telson are armed with about thirty to thirty-five short, closely set spines, those on the rounded apex rather shorter and more evenly and regularly arranged than the

lateral ones. There are no apical plumose setae. *Inner uropod* (fig. 30, *f*) one and a quarter times as long as the telson, inner margin with a row of about twenty-three short spines extending from the statocyst very nearly to the apex.

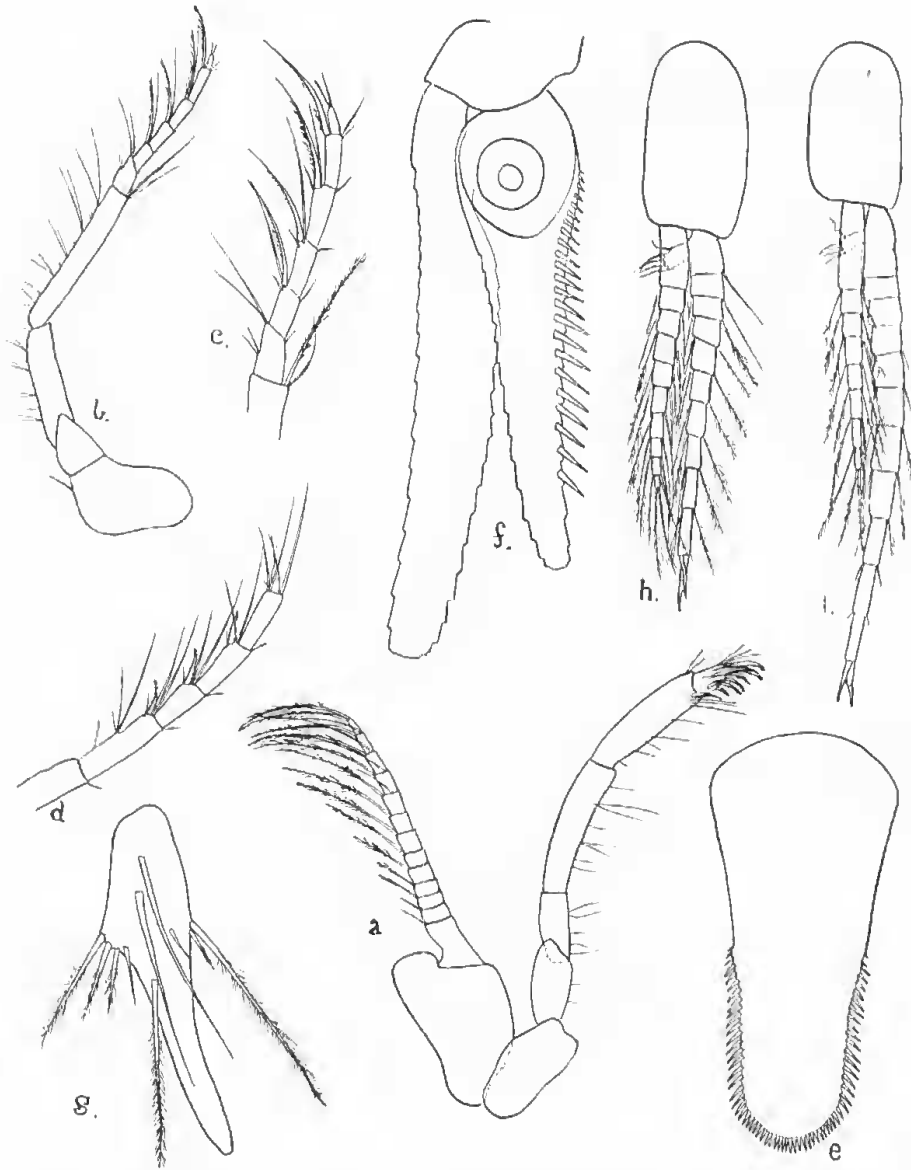


Fig. 30. *Australerhythrops paradiacki*. *a*, Gnathopod (second thoracic limb) ($\times 32$); *b*, endopod of the third thoracic limb ($\times 32$); *c*, sixth and seventh joints of the endopod of the third thoracic limb ($\times 50$); *d*, sixth and seventh joints of the endopod of the eighth thoracic limb ($\times 50$); *e*, telson ($\times 50$); *f*, uropods ($\times 50$); *g*, first pleopod of the male ($\times 125$); *h*, fourth pleopod of the male ($\times 39$); *i*, fifth pleopod of the male ($\times 39$).

Outer uropod one and a half times as long as the telson. *Pleopods of the male*: First pair rudimentary, each consisting of a very small, single, unjointed plate armed with a few long setae (fig. 30, *g*). Second and third pairs biramous, the rami equal in length and without modified setae. Fourth pair (fig. 30, *h*) with

the endopod longer than the exopod, the last two joints each armed with a single, stout, non-plumose seta. Fifth pair (fig. 30, *i*) with the endopod considerably longer than the exopod, nearly one and three-quarter times as long, the last two joints each armed with a single stout, simple seta, the preceding three joints with the normal plumose setae considerably reduced in length. *Brood pouch of the female* formed by three pairs of lamellae attached to the last three thoracic limbs, the first pair very small but distinctly present. *The mouth parts and thoracic limbs* are best described by reference to the figures. The mouth parts are essentially of the type characteristic of the Erythropini. The mandibles (fig. 29, *d*), have the incisive part, the lacinia, and the molar processes well developed. The maxillae (fig. 29, *f*) have a well-developed exopod, a setiform lobe on the second joint, and the terminal joint of the palp not expanded. The maxillipeds (first thoracic limbs) (fig. 29, *g*) are moderately robust, with a prominent endite on the second joint. The gnathopods (second thoracic limbs) (fig. 30, *a*) are rather long and comparatively slender, the fourth and fifth joints subequal in length, the sixth short and armed with a number of strong, short, plumose spines, and there is a well-developed nail. The remaining thoracic limbs (fig. 30, *b*) are somewhat slender. The sixth joint of the endopod of the fourth to the eighth pair (fig. 30, *d*) is divided into four subjoints by transverse articulations, and at the inner distal corner of each subjoint there is a stout plumose spine, shorter than the subjoint. In the endopod of the third pair of thoracic limbs (fig. 30, *c*) the sixth joint is divided into five subjoints, the first articulation being somewhat oblique and bearing no plumose spine, and the stout plumose spine on the inner distal corners of the subjoints is much longer than the subjoint.

Length, of adult males and females, 7 mm.

Loc. Watson's Bay, Port Jackson, New South Wales. "From dark crevice in eddy among the rocks at low water on the shore"; about fifty specimens of both sexes (W. E. J. Paradiée).

I know of no other species of Mysid with which this interesting new form can be confused. The structure of the pleopods of the male is unique. It comes nearest to *Holmesiella anomala* Ortmann, but in that species the first pleopod of the male is not rudimentary, only the fourth pleopod has an elongate and modified endopod, and the telson has a somewhat different shape and armature. *Holmesiella anomala* is, moreover, a large species, the type measuring 37 mm. I have pleasure in associating this interesting addition to the Mysidacean fauna of Australia with the name of the late Dr. W. E. J. Paradiée, who collected the material upon which this description is based.

In the preparation from which the drawing reproduced in fig. 29, *d* was made, the body of the mandible has become somewhat displaced, with the result that the spine-row is overlaid by the incisive part.